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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/752,548	01/08/2004	Dong Won Kim	2832-0174P	6105
2292 7590 04/24/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MULLINS, BURTON S	
			ART UNIT	PAPER NUMBER
			2834	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/24/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/24/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

10/752,548

Applicant(s)

KIM ET AL.

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 13-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/05 8/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of the restriction in the reply filed on 26 February 2007 is acknowledged. The traversal is on the ground that the groups of claims are not independent and distinct. This is not found persuasive because: 1) the motor of Group I is independent of the washing machine of Group II since a motor, per se, is not connected in design or effect to a washing machine except only in the sense that a motor may be used to turn a washing machine tub; and 2) the motor of Group I is patentably distinct from the washing machine of Group II since the two groups disclose two or more subjects patentable over each other, each group claiming distinctive elements. Further, separate classifications for motors and washing machines provide convincing evidence that the grouping is proper. The requirement is still deemed proper and is therefore made FINAL. Claims 13-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 26 February 2007.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

3. The information disclosure statements (IDS) submitted on 01 July 2005 and 11 August 2005 have been considered by the examiner.

***Claim Rejections - 35 USC § 112***

4. Claims 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 5 is a duplicate of claim 3 and thus fails to further limit. Similarly, claim 9 is a duplicate of claim 4 and thus fails to further limit. For purposes of examination, it will be assumed that claims 6 and 8 depend from claim 3 and that claims 10-12 depend from claim 4.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3-6 and 8-11 are rejected under 35 U.S.C. 102(a/e) as being anticipated by Yokota (US 7,078,841). Yokota teaches a motor comprising: a stator; a rotor (i.e., permanent magnet) 12 rotatably disposed around the stator 17 (Figs.1&3); and a rotor cup 11 having cooling-holes (through holes) 19 formed at the bottom part (bottom wall) 11b thereof for

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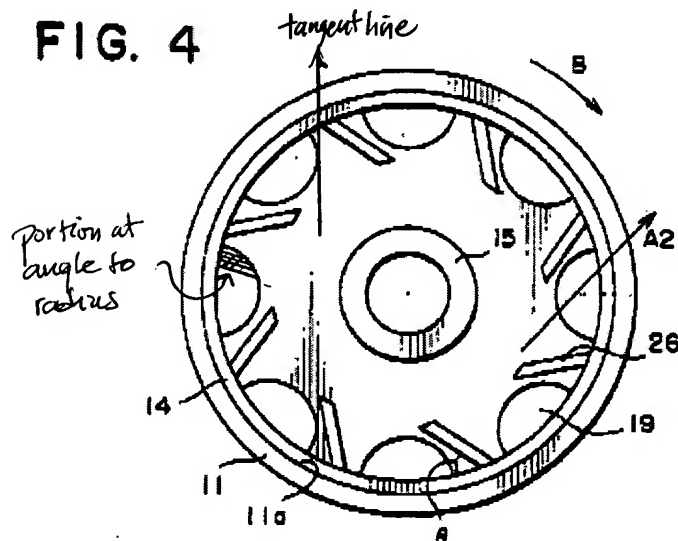
allowing external air to flow into the inside of the rotor cup therethrough (Fig.3), and lower blades 16/26 formed at the bottom part 11b thereof for generating a blowing force (Fig.1&4), the rotor 11 being fixed to the rotor cup 12 at the inner circumference thereof (Figs.1&3), wherein the lower blades 16/26 and the cooling-holes 19 are formed such that each of the lower blades 16/26 and the cooling-holes 19 is "at a prescribed angle to the radial direction of the rotor cup" [sic], i.e. as seen in Fig.4 the lower blades 26 extend at an angle to the radial direction, as does each cooling-hole since a portion of each semicircular cooling-hole is at an angle to the radius, or alternatively a tangent line of the cooling-hole semicircle may be chosen which is at an angle to the radius.

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Regarding claims 3 and 5, the rotor 11 is provided at the upper side 11a thereof with upper blades (not numbered, upper edge of L-shaped fins 16; Fig.2; c.4:22-33) for supplying external air to the upper part of the rotor when the rotor is rotated.

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Regarding claims 4 and 8-9, the rotor cup is provided at the circumference thereof with vents (portion of through-hole 19 in peripheral wall 11a; c.4:5-9; Figs.2&3) for allowing the air introduced into the inside of the rotor cup to be discharged therethrough.

Regarding claim 6, the upper blades of the fins 26 embodiment of Fig.4 are at a prescribed angle to the radial direction.

Regarding claim 10, the vents 19 are disposed below the rotor (magnets) 12 (Fig.2).

Regarding claim 11, the vents 19 are arranged in large numbers at the circumference of the rotor cup in the circumferential direction (portion of through-hole 19 in peripheral wall 11a; c.4:5-9; Figs.2&3).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota. Yokota teaches sloping lower blades (fins) 26 in the embodiment of Fig.4 but does not specify that “each of the lower blades has an acute sloping angle to the line extended in the rotating direction of the rotor cup and perpendicular to the radial direction of the rotor cup”. However, Yokota does recognize that “by adjusting the angle  $\theta$  formed between the fin 26 and the inner peripheral surface of the flywheel 11...the effect or action of the air currents or flows can be regulated” (Fig.4; c.6:18-21). It would have been obvious to modify Yokota to provide

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each lower blades 16 with an acute sloping angle to the line extended in the rotating direction of the rotor cup and perpendicular to the radial direction of the rotor cup since this would have regulated the air currents in the machine.

Regarding claim 12, the ratio between the area of a cooling-hole (i.e., axial-facing portion of through-hole 19) and the area of a circumferential vent (portion of through-hole 19 in peripheral wall 11a; c.4:5-9; Figs.2&3) is not specifically taught by Yokota to be in the range of 2:1 to 4:1. However, it is clear from Figs.2&3 that the circumferential area is generally less than the axial-facing area. A range of ratios between 2:1 and 4:1 would have been an obvious matter of engineering design since it has been held that where the general conditions of a claim are met, discovering optimum or workable ranges involves only routine skill. In re Aller, 105 USPQ 233.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 571-272-2029. The examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Burton S. Mullins  
Primary Examiner  
Art Unit 2834

bsm  
16 April 2007